

**REMARKS**

Claims 1-29 are pending in this application, of which claims 1-28 have been allowed and claim 29 has been amended. No new claims have been added.

Claim 29 stands rejected under 35 USC §102(b) as anticipated by U.S. Patent 5,825,519 to Prucnal (hereinafter "Prucnal").

Applicant respectfully traverses this rejection.

Prucnal discloses an optical demultiplexer including a first optical path that includes a first nonlinear optical element (NLE) which responds to a control pulse to induce a 180° phase shift in an optical data signal propagating therethrough. The NLE responds rapidly to the control pulse but slowly reverts to a non-phase shift state. A second optical path is provided which includes a second NLE. An optical output coupler is connected to the first and second optical paths and responds to in-phase data pulses therefrom to output a data pulse on a first output. The optical output coupler is responsive to 180° phase shifted data pulses to output a corresponding data pulse on a second output. An input data source concurrently couples a train of optical data pulses of wavelength  $\lambda$  onto the first optical path and the second optical path. A control input induces a first control pulse of wavelength  $\lambda$  onto the first optical path and a second control pulse of wavelength  $\lambda$  onto the second optical path, the second control pulse delayed a time  $t$  from the first control pulse, whereby a data pulse occurring during time  $t$ , is phase delayed by 180° by the first NLE but is not affected by an additional phase delay in the second NLE during time  $t$ .

Prucnal fails to disclose a control pulse having a wavelength different than the wavelength of the continuous light, as recited in claim 29.

Claim 29 reads on the embodiment shown in Figs. 8A and 8B. In claim 29, the first continuous light is introduced to the interference separator so as to be delayed from the second continuous light after the lights are outputted from the non-linear waveguide. In contrast, in Prucnal, the control pulse is delayed by the fiber delay (48) before the pulse is inputted into the non linear optical element (36).

Claim 29, continuous lights are introduced into the non-linear waveguide. In contrast, in Prucnal, two signals (46, 50) are pulse waves as shown in Fig. 3 of Prucnal.

Column 3, lines 16-19 of Prucnal disclose “Note that both the data pulses and control pulses exhibit an identical wavelength  $\lambda$ , and thereby may be precisely synchronized as a result of having been derived from a single laser source.” Namely, the control pulse and the data pulse have the same wavelength. Therefore, wavelength conversion cannot occur.

Thus, the 35 USC §102(b) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1-29, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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